

STABILIZED CD-4 ONE-PART FILM DEVELOPER CONCENTRATES

ABSTRACT OF THE DISCLOSURE

Photographic developer replenisher concentrates comprising more reactive developers, like 4(N-ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine (CD-4) undergo rapid oxidation, and consequently, have shorten shelf-life stabilities. Hydroxylamine type derivatives, while disclosed as being useful as a class of antioxidants for stabilizing photographic developer replenishers, most were found to impart either inadequate shelf-life stability for CD-4 developer, or interfered with "satisfactory developer performance." Surprisingly, it was discovered the shelf-life stability of replenisher concentrates comprising CD-4 photographic developer could be extended for periods of 2 years or longer, and also provide satisfactory developer performance when the hydroxylamine antioxidant comprises at least N,N-bis(2-sulfoethyl) hydroxylamine (SEHA) or a salt thereof.